

- WHAT IS CLAIMED IS:
1. A module for compensating chromatic dispersion of a line optical fiber (1) in a given spectral band, characterized in that the module includes a structure (9) carrying a plurality of submodules (4, 5) at least one of which is separable from the structure (9), which are disposed in series, which are interconnected by one or more connections (6) identifiable to the naked eye outside without damaging the module, and accessible from the fiber (2, 3) for compensating chromatic dispersion of a said spectral band, said compensation optical fiber in 10 15 20 25 30 35 3) being of the same kind for all the submodules (4, 5).
  2. A compensation module according to claim 1, characterized in that the spectral band is band C.
  3. A module for compensating chromatic dispersion of a line optical fiber (1) in a plurality of contiguous and non-overlapping spectral bands each covering at least 30 nanometers, characterized in that the module includes a structure (9) carrying a plurality of submodules (4, 8) at least one of which is separable from the structure (9), which are disposed in series, which are interconnected by one or more connections (6) identifiable to the naked eye without optical measurement and accessible from the outside without damaging the module, and each of which includes a support to which is fixed at least one optical fiber (2, 7) for compensating chromatic dispersion, at least one optical fiber (2, 7) having a compensation ratio from 0.9 to 1.1 for the center wavelength of one of said spectral bands, at least two submodules (4, 8) having compensation optical fibers (2, 7) of different kinds.

4. A compensation module according to claim 3,  
characterized in that the spectral bands are bands C and  
L.
5. 5. A compensation module according to claim 3 or claim 4,  
characterized in that each compensation optical fiber has  
a compensation ratio from 0.9 to 1.1 for the center  
wavelength of one of the spectral bands.
- 10 6. A compensation module according to claim 3,  
characterized in that each connection comprises at least  
one weld.
- 15 7. A compensation module according to claim 3,  
characterized in that each connection comprises at least  
one connector.
- 20 8. A compensation module according to claim 3,  
characterized in that the submodules are independent of  
one another.
- 25 9. A compensation module according to claim 3,  
characterized in that the module comprises only two  
submodules.
10. A compensation module according to claim 3,  
characterized in that the compensation optical fibers of  
all the submodules are the same length.
- 30 11. A compensation module according to claim 3,  
characterized in that each submodule comprises only one  
compensation optical fiber.
- 35 12. A method of producing an optical transmission line,  
the method including a step of installing a line optical  
fiber (1) and a compensation module according to claim 3  
for said line optical fiber.

13. A method of improving an optical transmission line comprising a line optical fiber (1) and a pre-existing and previously used compensation module according to  
5 claim 1 or claim 3 for said line optical fiber, the method comprising one or more exchange steps each consisting of removing from said module a submodule (5) and replacing it in said module by a submodule (8) whose compensation optical fiber (7) is of a different kind to  
10 the optical fiber (2) of the submodule (5) that has been removed, in order to obtain a module according to claim 3.

14. A method according to claim 13 of improving an optical transmission line, characterized in that at least 15 one of the original submodules (4) has not been subjected to and is not subjected to any of said exchange steps.